



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/506,501

09/03/2004

Claudia Becker

P08367US00/RFH

2837

881 7590 07/10/2009

STITES & HARBISON PLLC
1199 NORTH FAIRFAX STREET
SUITE 900
ALEXANDRIA, VA 22314

EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT

PAPER NUMBER

2439

MAIL DATE

DELIVERY MODE

07/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/506,501 | Applicant(s) BECKER ET AL. | |
| | Examiner Christian LaForgia | Art Unit 2439 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 May 2009 has been entered.
2. Claims 15-28 have been presented for examination.
3. Claim 1-14 have been cancelled as per applicant's amendment.

Response to Arguments

4. Applicant's arguments with respect to claims 15-28 have been considered but are moot in view of the new grounds of rejection set forth below.

Claim Rejections - 35 USC § 102

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 15-18 and 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,363,149 to Candelore, hereinafter Candelore, in view of U.S. Patent No. 6,005,938 to Banker et al., hereinafter Banker.

Art Unit: 2439

8. As per claim 15, Candelore teaches a method for controlling access to information scrambled at a broadcast center (column 4, lines 11-15) using a service key contained in a control word (column 4, lines 24-34), the control word being encrypted by means of an operating key (column 2, lines 47-55), said access control method comprising:

sending said scrambled information and periodic entitlement control message (ECM) messages (column 6, lines 29-37), to at least one descrambling terminal associated with an access control module provided with a security processor (column 4, lines 43-51), said ECM messages containing access criteria and the cryptogram of the control word, said control word and the cryptogram of the control word being changed periodically (column 2, lines 47-55), and

at each descrambling terminal comparing said access criteria with at least one access right stored in memory in the access control module (Figures 6A, 6B, 6C, 6D, 6E, 8A [block 830], column 4, lines 24-34);

accessing to said scrambled information at each descrambling terminal being conditional upon a "true" value for said access criteria when compared with at least one access right stored in the access control module (Figures 6A, 6B, 6C, 6D, 6E, 8A [block 830], column 4, lines 24-34), and accessing to said scrambled information comprising decrypting said cryptogram of the control word using the operating key in order to recover said control word and to descramble said scrambled information (column 2, lines 47-55, column 4, lines 24-34), wherein the method further comprises:

a) consecutive ECM messages with successive numbers represent a timebase formed by a plurality of individual time intervals for sending successive individual quanta of scrambled

Art Unit: 2439

information (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33, i.e. the ECM contains a key that corresponds to a given time period);

b) detecting in each descrambling terminal the number of each ECM message, and then, in response to a user request from a user of said descrambling terminal for conditional controlled access to at least a portion of said scrambled information (column 7, lines 36-47, column 8, lines 13-59); and

d) defining a time range by a first offset from said origin corresponding to the beginning of the time range, and a second offset corresponding to the end of the time range, the defined time range corresponding to a plurality of individual time intervals defining a plurality of successive individual quanta of scrambled information (Figures 6B, 6C, 6D, 8A, 8B, 8C, column 8, lines 13-59, column 10, lines 43-54, column 11, lines 1-33); and

e) communicating to the user authorization to access said scrambled information over the defined time range as a function of a specific access criterion (column 12, lines 31-41, i.e. granting access to the user if they are entitled to access the data contained in that time period).

U.S. Patent No. 6,035,038 to Campinos et al., hereinafter Campinos, discloses encrypting the control word in the entitlement control messages in at least the Abstract, as such encrypting control words is well-known and commonly practice, and the Applicant admits as much.

Column 7, lines 13-14 of U.S. Patent No. 7,092,729 B1 states that “the control word and the access criteria are used to build an Entitlement Control Message,” thereby showing that those two features are inherent in ECMs.

9. Candelore does not teach assigning a number to each ECM message so that the numbers assigned to consecutive ECM messages form a monotonic non-decreasing function and selecting

Art Unit: 2439

a number of a last processed ECM message at the sending time of said request, to constitute a time origin of said timebase.

10. Banker teaches assigning a number to each ECM message so that the numbers assigned to consecutive ECM messages form a monotonic non-decreasing function (Figure 4 [element 401], column 5, lines 18-38, i.e. applicant admits that the number assigned to the ECM message may be a time stamp); and

selecting a number of a last processed ECM message at the sending time of said request, to constitute a time origin of said timebase (column 5, lines 18-38, column 7, lines 17-24).

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to assign a number to each ECM message so that the numbers assigned to consecutive ECM messages form a monotonic non-decreasing function and select a number of a last processed ECM message at the sending time of said request, to constitute a time origin of said timebase, since Banker states at column 7, lines 17-24 that it would help defeat attempts to obtain instances of services for free by replaying service authorization information.

12. Regarding claim 16, Candelore teaches that said monotonic non-decreasing function is a continuously increasing function of the sending time of the ECM messages (Figures 6B, 6C, 6D, 8A, 8B, 8C, column 10, lines 43-54, column 11, lines 1-33, i.e. time X, time X+1...).

13. Regarding claim 17, Candelore teaches said monotonic non-decreasing function is an increasing step function of the sending time of said ECM messages (Figures 6B, 6C, 6D, 8A, 8B, 8C, column 10, lines 43-54, column 11, lines 1-33, i.e. time X, time X+1...).

Art Unit: 2439

14. With regards to claim 18, Candelore teaches that each step is defined by a constant number over a plurality of sending times of said ECM messages which defines a timebase with a resolution different from the sending time of said ECM messages (Figure 5A, 5B, column 9, line 34 to column 10, line 28).

15. With regards to claim 20, Candelore teaches that said specific access criterion corresponds to free access (column 1, lines 14-24, column 8, lines 44-46, i.e. HD signal can be received via antenna for free).

16. With regards to claim 21, Candelore teaches that said time range is either an interval backwards from said origin, first offset ≤ 0 AND second offset ≤ 0 , or an interval forwards from said origin, first offset ≥ 0 AND second offset ≥ 0 , or a forward and backward interval, first offset ≤ 0 AND second offset ≥ 0 (Figures 5A, 5B, column 2, lines 47-55, column 9, lines 48-62, column 10, lines 5-28).

17. Regarding claim 22, Candelore teaches managing viewings at the request the user in accordance with said specific access criterion in said time range and outside said time range, said method includes at least:

defining a maximum authorized number of viewings; testing whether the number of viewings is less than or equal to said authorized maximum number of viewings; and, in the event

Art Unit: 2439

of a negative result of said test, refusing access to the scrambled information (column 2, lines 1-28, i.e. limiting the number of viewings); else

testing whether said current number is in said time range (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33); and,

in the event of said current number being in said time range (Figures 6B, 6C, 6D, column 10, lines 43-54, column 11, lines 1-33);

authorizing access to said scrambled information on the basis of the specific access criterion during said time range (column 10, lines 5-43); else

authorizing access on the basis of a distinct access criterion other than specific access criterion (column 10, lines 5-43). Boolean operations used for authorization are well known and commonly practice, and official notice is hereby taken of such.

18. With regards to claim 23, Candelore teaches authorization of forward access to said scrambled information beyond said time range, on the basis of an access criterion other than said specific access criterion (column 2, lines 56-67, column 10, lines 55-67, i.e. recording for later use, future time period); and

authorization of backward access to said scrambled information before said time range, on the basis of an access criterion other than said specific access criterion (column 10, lines 55-67, i.e. past time period). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

Art Unit: 2439

19. With regards to claim 24, Candelore teaches that, if said current number is not in said time range, said authorization of access based on an access criterion other than said specific access criterion:

submitting said current number and said first Boolean variable to a first logical test to verify whether said current number is equal to or greater than said origin number and to authorize forward access to said scrambled information (column 10, lines 43-54, column 11, lines 1-33) or

to a second logical test to verify whether said current number is equal to or the less than said origin number and to authorize backward access to said scrambled information (column 10, lines 43-54, column 11, lines 1-33) and, in the event of a positive result of either of the first or second logical tests:

authorizing forward access, or backward access as appropriate to said scrambled information with no incrementing of the number of viewings (column 10, lines 55-67) and, in the event of a negative result of both the first and second logical tests:

testing whether said number of viewings is less than the authorized maximum number of viewings; and in the event of a negative result of said test, in refusing access to the scrambled information and incrementing said number of viewings by 1 (column 2, lines 1-28), else

authorizing forward or backward access, as appropriate, to said scrambled information (column 10, lines 55-67). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

Art Unit: 2439

20. Concerning claim 25, Candelore teaches that for a specific access control corresponding to a basic rewind service for a recording and an authorized maximum number of viewings = 1 (column 2, lines 1-28), said time range is a backward range defined by first offset < 0 AND second offset = 0 (column 10, lines 43-54, column 11, lines 1-33), forward access being authorized, backward access not being authorized (column 10, lines 55-67). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

21. Concerning claim 26, Candelore teaches that for a specific access control corresponding to a free access preview service, said time range is a forward range defined by first offset = 0 AND second offset > 0 (column 10, lines 43-54, column 11, lines 1-33), the authorized maximum number of viewings is = 1 (column 2, lines 1-28), recording and/or backward access not being authorized (column 2, lines 56-67). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

22. Concerning claim 14, Candelore teaches that for looped transmission of scrambled information, said authorized maximum number of viewings is set a particular value (column 2, lines 1-28), said time range for access to the scrambled information has a specific value (column 10, lines 43-54, column 11, lines 1-33). As noted above, Boolean operations are well known and commonly practiced, and the Applicant admits as much.

Art Unit: 2439

23. Claims 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Candelore in view of Banker as applied above, and in further view of U.S. Patent Application Publication No. 2002/0076050 to Chen et al., hereinafter Chen.

24. Concerning claim 19, Candelore and Banker do not teach that each number is defined by a timestamp, each step being defined by the time range represented by two separate timestamps.

25. Chen teaches that each number is defined by a timestamp, each step being defined by the time range represented by two separate timestamps (Figure 4 [blocks 408, 412], paragraph [0080]-[0086]).

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to define the time range by two separate timestamps, since Chen states at paragraph [0078] that the use of timestamps allows the legal owner to trace the last legal session when the current session has been compromised.

27. Claim 28 appears to incorporate all the limitations from claims 15-27. Since the Examiner has rejected claims 15-27, claim 28 is rejected on substantially the same grounds. Furthermore, since the Applicant has failed to present any new grounds of arguments, and only revisits arguments made with respect to the independent claims, the Examiner's arguments are reiterated.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2439

29. The following patents are cited to further show the state of the art with respect to ECM messages, such as:

United States Patent No. 7,257,227 B2 to Chen et al., which is cited to show controlling access to information using entitlement control messages.

United States Patent No. 7,203,317 B2 to Kallahalla et al., which is cited to show using recursive key generation to control access to content.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian LaForgia whose telephone number is (571)272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christian LaForgia/
Primary Examiner, Art Unit 2439

Application/Control Number: 10/506,501

Page 12

Art Unit: 2439

clf